

## REMARKS

### 1. Withdrawn Rejections

Applicants gratefully acknowledge the Examiner's withdrawal of prior rejection of Claims 1, 11-13, 16-19, and 25 under 35 U.S.C. 112, 2<sup>nd</sup> paragraph; rejection of Claim 25 under 35 U.S.C. 112, 2<sup>nd</sup> paragraph; and rejection of Claims 1, 11-13, 16, 18 and 19 under 35 U.S.C. 102(b) as anticipated by Dumermuth et al.

### 2. Rejection of Claims 16-19, and 25 under 35 U.S.C. 112, second paragraph

The Examiner rejected Claims 16-19, and 25 under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

A. The Examiner argued that Claim 16 is indefinite for the recitation of "at least about 9 contiguous amino acid region", which the Examiner argued fails to set out the metes and bounds of the invention. The Examiner rejected Claims 17-19 as dependent upon a rejected Claim. In response to the Examiner's argument and in order to expedite allowance of Claims, Applicants have, without prejudice or disclaimer of the subject matter thereof, amended Claim 16 to recite a composition comprising an isolated astacin metalloendopeptidase protein encoded by a nucleic acid molecule that hybridizes to a nucleic acid molecule with a SEQ ID NO of the present invention under specified hybridization and wash conditions.

B. The Examiner argued that Claim 25 is indefinite because it is unclear what is meant by the term "homolog thereof", which the Examiner interpreted to mean proteins having similar function as those of the recited SEQ ID NOs. In response to the Examiner's argument and in order to expedite allowance of Claims, Applicants have, without prejudice or disclaimer of the subject matter thereof, amended Claim 25 to recite an isolated protein having a SEQ ID NO of the present invention and a protein comprising an at least 9 contiguous amino acids thereof. Therefore, it is believed that the Examiner's concerns regarding the term "homolog" are moot, since the claimed proteins are clearly defined.

In view of the foregoing amendments, Applicants respectfully request withdrawal of the Examiner's rejection of Claims 16-19, and 25 under 35 U.S.C. 112 2<sup>nd</sup> paragraph.



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Rejection of Claims 1, 11-13, and 16-19 under 35 U.S.C. 112, first paragraph

The Examiner rejected Claims 1, 11-13, and 16-19 under 35 U.S.C. 112, first paragraph. The Examiner argued that while the specification is enabling for non-vaccine compositions, the specification does not reasonably provide enablement for vaccine compositions and their use in vaccination against diseases caused by parasites. The Examiner further noted, with respect to Claims 8 and 26, that proteins of the present invention could be used to make antibodies for use in assays to detect infection by parasites, as taught in the specification on page 71, beginning at line 15.

In response to the Examiner's rejection, Applicants have amended Claims 1 and 11 to recite a protein that selectively binds to an antibody raised against an amino acid sequence having a SEQ ID NO of the present invention. Applicants have amended Claim 16 to recite a composition comprising an excipient and an isolated protein encoded by a nucleic acid sequence that hybridizes to a nucleic acid molecule having a SEQ ID NO of the present invention.

In view of the foregoing arguments and amendments, Applicants respectfully request withdrawal of the Examiner's rejection of Claims 1, 11-13, and 16-19 under 35 U.S.C. 112, first paragraph.

In view of the foregoing amendments and remarks, Applicants submit that all pending claims are in condition for allowance. Consideration of the above and withdrawal of all rejections are respectfully requested. In the event that the Examiner has any questions regarding Applicants' position, the Examiner is invited to contact the below named patent agent at (303) 863-9700.

Respectfully submitted,

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